

REMARKS

The present continuation application has not been specifically examined, but there was an official action in the parent application. That official action found that original claims 6, 7, 17, 23-31 contained allowable subject matter.

In the parent application, claims 1, 4, 5, 8, 11, 12, 14-16, and 18 were rejected under 35 USC 102(b) citing U.S. Patent 5,694,852 (Bressler), which has the same assignee as the present application. In that rejection the Examiner said incorrectly that the carriage 32 that rotatably holds the roll was moved downstream along a processing path by a linear driver. Actually, Bressler's roll 14 is not carried on the carriage 32 and does not translate axially. Instead, carriage 32 carries support 34 to move the nozzle 48 axially (a direction parallel to axis 18).

Therefore, Bressler does not show, as provided in original claim 1:

- a carriage for rotatably holding said roll;
- a rotary driver for rotating said roll;
- a linear driver for moving said carriage downstream along a processing path in order to move said roll axially ....

In comparison to Bressler, moving the carriage and the roll downstream changes the arrangement from one designed to handle rolls one at a time to an arrangement where the rolls can be processed in an assembly line fashion. Moving rolls to/from a coating station will enable efficient, serial processing of rolls. Bressler is unconcerned with this type of handling and therefore has no teachings relevant to the above noted features of claim 1.

The other references that were cited against other claims are irrelevant to original

claim 1. In particular, U.S. Patent 5,667,842 (Larson) is concerned with applying abrasives to a web and bears no relation to moving a roll downstream. U.S. Patent 5,474,799 (Thigpen) concerns spraying resin on a stator coil that is tilted and turned but is not moved downstream along a processing path. In U.S. Patent 4,737,378 (Narita) a roll can apply a coating of photoresist solution to the surface of a substrate 10 of glass, ceramic or silicon, but is unconcerned with moving rolls downstream along a processing path. U.S. Patent 5,903,954 (Gajewski) concerns processing flexible sheets, not moving rolls downstream along a processing path.

Similarly, Bressler, Thigpen, Gajewski, and Narita do not show the following step from original method claim 41: "rotating said roll about its axis while translating said roll axially past said coating head ...."

Regarding independent claim 34, the Examiner contends that Larson shows "secondarily curing said composition film with an energy source at a secondary energy flux density that is greater than said primary energy flux density," as recited in original claim 34. To support this argument the Examiner cites the following statements at column 24, lines 53-63, of Larson:

Next, the binder precursor in the slurry is at least partially cured by exposure to an energy source 57, preferably providing radiation in at least some portion of the UV and/or visible spectrum ranging from about 300 nanometers to about 1000 nanometers, and other optional energy sources. After this at least partial cure, the slurry is converted to an abrasive composite 59 that is bonded or adhered to the backing. The resulting abrasive article is removed from the production tool by means of nip rolls 58 and wound onto a rewind station 60. In this method the preferred backing is polyester film.

Applicant contends that this statement does not suggest increasing the energy flux density

when performing secondary curing. It only suggests secondary curing. (The Examiner also cites Larson at column 16, lines 47-49, but that passage is similarly lacking).

Moreover, the secondary curing mentioned in the above statement from Larson seems to be performed in connection with the application of another coating. In fact, the above statement from Larson cited by the Examiner is followed by the statement that "[t]he remaining steps to make the abrasive article are the same as detailed above." Larson at column 25, lines 1-2.

In particular, Larson involves the making of abrasive sheets in the nature of sandpaper. The material handling and translations involved with fabricating such abrasive sheets bears almost no relationship to the apparatus and techniques involved in the present invention. To make such abrasive sheets, in some instances Larson applies three different coats that are partially or fully cured. For example, Larson provides:

After the saturant coating precursor is at least partially cured, a make coating precursor may be applied by any conventional technique such as roll coating, die coating or knife coating. Abrasive particles are then applied to the coated backing by a method such as drop coating, electrostatic coating, and the like. The make coating precursor is then exposed to conditions sufficient to at least partially cure or gel the polymerizable moieties in the slurry.

A size coating precursor may then be applied over the abrasive grains by any of the above-mentioned conventional techniques, and subjected to conditions to effect a partial cure.

Larson at column 25, lines 35-46. Larson does not explain how the abrasive sheets are moved from one coating stage to the next. The processing diagrams of Figures 3 and 4 only disclose a single coating process.

To emphasize the material handling aspects of the present invention, claim 34 was amended to recite: "a linearly movable carriage for holding said member." Larson does

not suggest such a linearly movable carriage.

Furthermore, Thigpen, Gajewski, and Narita are unconcerned with a primary and secondary curing stage and are therefore irrelevant to claim 34.

Also for the same reasons, Bressler, Thigpen, Gajewski, and Narita do not show the following steps from original method claim 37:

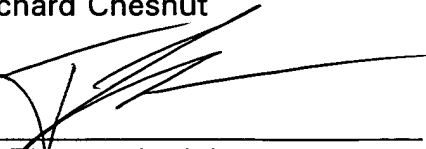
initially curing said composition film at a first station with an energy source at a primary energy flux density; moving said composition film linearly to a second station; and secondarily curing said composition film at said second station with financing to an energy source at a secondary energy flux density that is greater than said primary energy flux density.

Finally, the other claims depend from the above noted independent claims and therefore distinguish over the cited art for at least the reasons given in connection with those independent claims.

It is believed that the foregoing fully responds to the objections and rejections entered by the Examiner and places this application in condition for allowance, which action is respectfully requested.

Respectfully submitted,  
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